

Energy Future System Operator Consultation

This response is on behalf of Mutual Energy Ltd., a Northern Ireland-based company who own the Moyle electricity Interconnector between NI and Scotland, as well as the gas interconnector between NI and Scotland, and much of the onshore gas transmission network in Northern Ireland.

1. Do you agree that net zero will create the need for new technical roles in the electricity and gas systems, and require a new approach to energy system governance?

Yes, we agree that an integrated, whole system approach will represent the best pathway to delivering net zero.

New technologies such as green hydrogen production via electrolysis will form an important part of managing the electricity system in the future. Determining the most efficient method of delivering energy to the end consumer, whether via cables or pipelines, will require a holistic view across both electricity and gas systems.

2. Do you agree that the establishment of a Future System Operator is needed to fulfil the kinds of technical roles needed to drive net zero?

While it may be possible to incentivise the whole-system approach via amendments to existing licences, such as placing duties on the gas and electricity system operators to work together, it is probably more efficient to create a single entity as the electricity and gas transmission networks are already operated within the same corporate group in Great Britain and have a history of being managed in a complementary manner. As such, we agree that a Future System Operator should be created to oversee both the gas and electricity systems as the circumstances in GB seem favourable for this to be an efficient approach. The exact responsibilities of this new organisation are discussed in more detail in our answers to questions 8 and 10.

3. Do you agree that a Future System Operator should have roles in both the electricity and gas systems?

Please see response to question 2.

4. Do you agree that a Future System Operator should be entirely separate from National Grid plc?

There are numerous transmission asset owners across the existing electricity and gas systems in GB. We agree that the Future System Operator should be entirely separate from all of them, including National Grid, to achieve true independence.

5. What issues are there with existing institutional arrangements in the UK energy system in relation to system-wide decision-making and planning?

In terms of the energy transition, there are currently incentives for companies who own assets in either the electricity or gas sector to promote their sector as the 'best' way to reach net zero. For example, in terms of decarbonising heat, vested interests can tend to promote heat pumps and hydrogen boilers as catch-all solutions. This, along with partisan lobbying in the media, can cause confusion for consumers, and could lead to inefficient solutions being progressed and 'locked-in'. In

reality, it will likely be a mix of the two technologies, working together in harmony, which will deliver net zero at the most efficient cost to consumers. The exact mix, however, will require a holistic view to be determined.

6. What examples/case studies are you aware of where net zero delivery in one part of the energy system did not adequately account for cross-system impacts or costs?

No answer.

7. Where should the government focus in our efforts to improve systems thinking and coordination across the energy system?

We need whole systems thinking now in terms of developing long-term infrastructure. It takes years, in some cases over a decade, to deliver infrastructure projects. Currently the lack of whole systems thinking means that there is no cohesive view of which projects should be developed further and which will be unnecessary or less efficient than alternative mechanisms.

To transition to a future energy system, we need to have a clearer idea of what it will look like. This needs to be the starting point for whole system thinking. Current long-term planning is very domain-specific, for example focusing primarily on either electricity or gas. We need a combined approach to understand to what extent the electricity system needs to be built out to cope with electrification of heat, for example, or whether the gas network requires investment to maintain its role as an efficient medium to deliver energy for heat to people's homes.

Alongside increased collaboration between the electricity and gas sectors, we will also need closer working between transmission and distribution within the two sectors.

8. Do you agree that the FSO should undertake all the existing roles and functions of NGESO? If not, please explain why.

We feel that there are benefits and costs of moving the existing ESO's role as real-time manager of the electricity system to a new FSO, alongside more strategic planning functions.

On one hand, the real-time operations might not be appealing to a FSO as this role brings with it a significant element of risk, both financial and reputational. Should there be an event where there is lost load, for example, then the FSO risks significant, if not critical, reputational damage in its role as advice and planning provider. To mitigate this risk, the FSO might have an incentive to recommend 'over-provision' of future network capacity, to minimise the risk of lost load events in real-time. Evidently, this would not be in consumers interests.

Conversely, splitting the real-time and strategic planning roles of the proposed FSO might incentivise under-investment in future network capability. Not having the experience of real-time management of the electricity system might mean that the strategic function lacks expertise with regard what developments will be required going forward.

Additionally, the risk to reputation of a lost load event will not be as strong for a separate strategic planning body, as the blame could be passed to the real-time system operator. Depending on the exact set up of the Energy Codes, as being consulted on concurrently; if the strategic planning function of the FSO is also a Code Manager or IMRB, there is a risk, real or perceived, that its

decision-making will be unduly influenced by government policies and priorities. This will be particularly acute if it is set up as a public body as discussed in question 14. In this case, there may be a risk that short-term consumer cost implications could be prohibitive for longer-term investment required for secure operation of the system with net zero operations.

9. Do you agree there is a case for the FSO to undertake the long-term strategic functions outlined in Option 1? Please elaborate and provide any views on the functions we have outlined in Option 1.

We agree the FSO should take on long-term strategic gas functions.

In terms of the NEC role, as the holder of the equivalent role in Northern Ireland, we appreciate there would be significant interaction between the gas and electricity systems in the event of a gas network emergency. As such, it would make sense for the FSO to take on the role, provided it has robust obligations to maintain sufficient expertise in terms of the gas network (please see answer to question 18) and health and safety requirements.

10. Do you agree there is not currently a case for the FSO to undertake all GSO roles and functions, including real-time gas system operation, as outlined in Option 2? If you do not agree, please explain why.

We agree that there is not currently a case for the FSO to undertake all GSO roles and functions, including real-time gas system operation although there may be a case for this in the future.

In a more integrated future, power-to-gas storage via electrolysis and burning the resulting hydrogen in electricity generators will be commonplace.

There may be benefit to a single control room overseeing electricity and gas network operations. For example, say if there was excessive wind generation, and electricity system frequency was creeping above acceptable limits, the electricity control room may wish to instruct electrolyzers to switch on and begin producing hydrogen (if they were not already). However, in order to do that, they may need to make sure that the gas transmission network had the capability to transport that hydrogen and store it.

It may be the case that market arrangements are sufficient to incentivise 'correct' behaviour in this regard, but the idea of a single-real time control room should not be ruled out. The best approach will depend on the relative efficiency of each approach. There will also need to be consideration given to any potential structure's implications on Safety Cases etc. to ensure that systems are managed in a safe and secure manner.

11. Do you have views on the proposal for an advisory role? What organisations do you consider would benefit from the provision of advice by the FSO? Who should bear the costs of providing that advice?

We agree that the FSO should have an advisory role, taking into account the issues raised in response to question 18.

We also note that there may be second-order benefits to the FSO publishing advice in terms of providing confidence to investors that projects are worthwhile and should be progressed, potentially reducing their riskiness and therefore costs.

12. Do you have any views on the other areas where we are considering new and enhanced roles and functions for the FSO (outlined in section 3.2)?

We do not feel it would be appropriate for an FSO to have an enhanced role in dispute resolution. While existing ESO responsibilities in terms of capacity market prequalification should be transferred across, we do not understand that there is any need for additional dispute resolution responsibilities to be moved across to a FSO from Ofgem.

We agree that the FSO should take on advisory roles and system planning (subject to our response to question 18). Our response to question 18 will be particularly relevant in regard to the FSO taking on a greater role in heat and transport decarbonisation.

We also agree that the FSO should work closely with gas and electricity distribution networks.

In terms of proposed roles around competition in energy markets and energy market design, we would emphasise that there should be appropriate transparency mechanisms, external oversight (such as similar to the current functioning of BEIS' Panel of Technical Experts with respect to the capacity market) and adequate recourse to appeal for any decisions the FSO could make if given these roles.

13. What are your views on our proposed characteristics and attributes of a future system operator and how the models presented would deliver against them? Are there other characteristics or attributes we have not yet considered?

We agree that the FSO should be technically expert, operationally excellent, accountable, independent and resilient.

14. Are we considering the right organisation models for the FSO? And why?

The two options presented are a for-profit private company, and a public sector entity. We feel that a third option could be a 'not for dividend' private sector company limited by guarantee (or "mutual" company), set up in such a way as to be able to pass through costs, but not focused on earning a rate of return for shareholders. This model should be characterised by extremely robust governance arrangements and could be regulated by a 'shadow' price control, which operates in the same manner as a traditional price control, other than costs ultimately being pass-through. The shadow price control acts as a control on costs and management incentive in the absence of the profit and dividend motive. This model would strike a desirable balance between the advantages and disadvantages of the two options proposed in the paper.

15. Are we considering the right elements for the FSO's regulatory and accountability frameworks? And why?

We agree that the FSO should be licenced.

The FSO should also be subject to codes, but there are potential conflicts of interest should the FSO be appointed as a code manager or IRMB as outlined in the consultation on the Design and Delivery of the Energy Code Reform. This interaction would need to be considered carefully.

16. Do you have views on the level of shareholding or control involving other 'energy interests' and the FSO at which a conflict of interest would become a concern?

A mutualised company as outlined in our response to question 14 would not face issues of shareholder interests, as it would not be driven primarily by generating a rate of return and would be managed in consumer interests.

17. Are we considering the right implications of our proposals for Elexon and Xoserve?

No answer.

18. What is your view on the preferred implementation approach? Please explain why.

In terms of the implementation approach, while we see the appeal of spinning out the ESO into an independent body firstly, and then adding in the gas functions at a later date, we think that this could have issues in the organisation's ability to provide good quality advice and future planning.

There is a risk that this approach could inadvertently embed silo working within the new organisation and lead to it lacking the expertise to fulfil its advisory and strategic planning role during the implementation phase.

While the new FSO is in the implementation stage, it would consist entirely of an independent ESO. That means it would lack expertise in the gas sector. As a result, it would lack the competence to fully advise on any issues relating to the gas network, and any advice it would give under its advisory role would likely be biased in favour of electrification options.

The proposed phased approach could also have longer-term implications for the new FSO's ability to work across the electricity and gas sectors. Spinning out an independent ESO, and then merging in gas functions at a later date, would design in a lag to organisation transformation to a fully impartial and expert whole system operator. This could create silo working, and also lead to either actual bias, or the risk of perception of bias towards electrification as opposed to decarbonising the gas network.

As such, we propose an approach to the establishment of a FSO include both gas and electricity functions from the start, and to have a senior leadership team made up of individuals from both sectors.

19. Based on the areas where we are considering new and enhanced roles and functions for the FSO, which of these should be prioritised for development? Please explain why.

No answer.

20. What do you believe are the risks to implementation? How can these be mitigated?

Please see response to question 18.

21. Do you have any comments on potential implications of implementation for you, your organisation, or any other stakeholders?

No answer.

22. What is your view on the position there are likely to be cost savings across the energy system from an increased "whole system" view, as described in paragraphs 47-52 of the IA? If so, is the potential magnitude of savings illustrated fairly in the IA? If not, why not?

No answer.

23. What is your view on the conclusion that policy intervention is likely to increase the benefits of onshore electricity network competition, as described in paragraphs 53-59 of the IA? If you agree, is the potential magnitude of savings illustrated fairly in the IA? If not, why not?

No answer.

24. Do you think that the impact assessment has identified and considered the key costs and benefits of policy intervention? If not, can you provide details on other impacts that have not been considered?

No answer.

25. Do you think that the distribution of impacts is fairly represented, with impacted groups correctly identified? Outlined in table 5 of the IA.

No answer.

26. We invite respondent's views on whether the proposals for energy system governance reform may have a different impact on people who have a protected characteristic (age, disability, gender re-assignment, marriage and civil partnership, pregnancy and maternity, race, religion or believe, sex or sexual orientation), in different ways from people who do not have that characteristic. Please provide any evidence that may be useful to assist with our analysis of policy impacts.

No answer.